This rejection is respectfully traversed with respect to claims 1-7, 9, 10, 12, 13, and 15-17 as amended. Specifically, the probe defined by claim 1 is now amended to specify at least first and second electrodes positionable on or within the object to be imaged in proximity to the region of interest, distal ends of the electrodes being spaced apart and disconnected. Similarly, claim 13 (c) is amended to specify detecting magnetic resonance signals from the region of interest with an array of at least two spaced electrodes in proximity to the region of interest, distal ends of the electrodes being spaced apart and disconnected, tissue in the region of interest cooperating with the electrodes to form a signal detector.

This is in accord with the description of the invention in the specification. Note the summary of the invention on page 2, that in accordance with the invention, two or more probes cooperatively function with tissue or fluid being imaged to effectively form a detector for detecting magnetic resonance signals emitted from the tissue or fluid. In one embodiment, two electrodes are implanted in tissue with the tissue between the electrodes forming a parallel resistor-capacitor circuit that effectively forms a sensitive signal detecting structure with the electrodes.

As further described in the detailed description of the invention on page 3, in the simplest form, the probe comprises two electrodes 10, 12 placed in a conducting medium such as tissue or saline 14.

This is unlike the structure disclosed by Atalar '801 in which conductors 24, 26 shown in Fig. 2, for example, are electrically connected by wire 32. See column 7, lines 37-39. Similar electrical connectors 118, 125 are used with the electrodes shown in Figs. 8 and 9 of Atalar. Atalar employs rings in the embodiment of Fig. 7 as a Faraday shield, but neither rings nor a Faraday shield are recited in the applicant's claims. Moreover, the rings are not signal detecting structures.

Accordingly, it is respectfully submitted that the probe defined by claims 1-7, 9, 10, 12-13, and 14-17 is neither shown nor suggested by Atalar '801.

Claims 1-6, 9, 13, 14, and 16 have been rejected under 35 U.S.C. 102(e) as being anticipated by Atalar et al., 6,263,229, the Examiner stating that Atalar teaches a

miniature magnetic resonance catheter coil comprising first and second electrically conductive portions and feedwires which function to form a signal detecting coil.

This rejection is respectfully traversed with respect to the claims as amended. Again, Atalar '229 utilizes two coil elements which are electrically connected by conductive material such as the electrodes 4 and 6 of Fig. 1 which are connected by electrically conductive material 8. See column 6, lines 6-8. Similarly, the embodiment of Fig. 2 includes a first coil portion 32, a second coil portion 34, and an electrically conductive connecting end portion 36. This is unlike the claimed probe in which first and second electrodes have distal ends which are spaced apart and disconnected and wherein the electrodes function with matter within the region of interest to form signal detectors. As noted in applicant's specification, any conductive medium to be imaged can be used with the probe such as human tissue which is largely normal saline.

Accordingly, it is respectfully submitted that claims 1-6, 9, 13, and 16 as amended are neither shown nor suggested by Atalar '229.

Claims 8, 11, and 18 have been rejected under 35 U.S.C. 103(a) as being unpatentable over Atalar et al. '801, the Examiner alleging that it is well know in the art to make electrodes that extend and retract from a catheter.

This rejection is respectfully traversed for the reasons given above for the patentability of claims 1-7, 9, 10, 12-13, and 14-17 over Atalar '801. These claims depend from claims 1 and 13 and are patentable for the same reasons as given above.

Claims 1-6, 13, 14, and 16 have been rejected under 35 U.S.C. 103(a) as being unpatentable over Ishikawa et al. 6,447,448, the Examiner noting that Ishikawa teaches a miniature implanted orthopedic sensor using strain gauge sensors.

This rejection is respectfully traversed with respect to claims 1-6, 13, and 16 as amended. The claimed invention is directed to a probe for detecting magnetic resonance signals and not to a probe for monitoring orthopedic structures as is Ishikawa. Ishikawa is concerned with stress on bones, intervertebral discs and the like in which a strain gauge has utility. The use of a strain gauge in a probe for detecting magnetic resonance imaging would not be useful. Ishikawa does not disclose a probe which

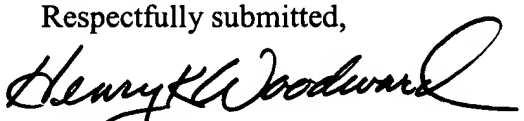
includes first and second electrodes with distal ends of the electrodes being spaced apart and disconnected, wherein the electrodes cooperate with matter within a region of interest to form a MRI signal detecting coil. This is not shown nor suggested by the orthopedic sensor of Ishikawa.

Accordingly, it is respectfully submitted that claims 1-6, 13, and 16 as amended are not suggested by Ishikawa and thus are patentable thereover under 35 U.S.C. 103(a).

Since claims 1-13 and 15-18 as amended are patentable under 35 U.S.C. 102(b) and 103(a) over Atalar '801, since claims 1-13 and 15-18 as amended are patentable under 35 U.S.C. 102(e) and 103 over Atalar et al. '229, and since claims 1-6, 13, and 16 as amended are patentable under 35 U.S.C. 103(a) over Ishikawa et al., all as above set forth, it is requested that claims 1-13 and 15-18 as amended be allowed and the case advanced to issue.

Should the Examiner have any questions concerning the present Amendment and response, a telephone call to the undersigned attorney is requested.

Respectfully submitted,



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IN THE CLAIMS:

Rewrite claims 1 and 13 as follows:

2. (Amended) A probe for detecting magnetic resonance signals emitted from a region of interest in an object comprising:

(a) at least first and second electrodes positionable on or within the object in proximity to the region of interest, distal ends of the electrodes being spaced apart and disconnected, and

(b) feed wires coupling proximal ends of the electrodes to a signal detector,

wherein the electrodes and feed wires cooperatively function with [matter] tissue within the region of interest to form a signal [detecting coil] detector.

13. (Amended) A method of imaging a region of interest in an object comprising the steps of:

(a) placing the object in a static magnetic field,

(b) applying RF excitation pulses to the region of interest, and

(c) detecting magnetic resonance signals from the region of interest with an array of at least two spaced electrodes in proximity to the region of interest, distal ends of the electrodes being spaced apart and disconnected, tissue in the region of interest cooperating with the electrodes to form a signal detector.